

### COMPRESSOR DEFINITION

Designation	EM C3125U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	711JA52

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50	[ V / Hz ]	
4 Application type	Low-Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm <sup>2</sup> ] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	6.09	[cm <sup>3</sup> ] (0.372 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	17.600	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	8.17	[kg] (18.01 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TSD2-220V/TSD2-220V1.2/TSD2-D-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)	[µF(VAC minimum)]
5 Motor protection	4TM276JDBYY	
6 Start winding resistance	13.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			EN12900LBP Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
619	156	181	113	0.54	2.07	5.46	1.38	1.60

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	647	163	190	111	0.53	2.08	5.81	1.46	1.70
-30	(-22)	808	204	237	125	0.60	2.60	6.48	1.63	1.90
-25	(-13)	1014	255	297	138	0.66	3.27	7.36	1.85	2.16
-20	(- 4)	1265	319	371	150	0.72	4.10	8.43	2.12	2.47
-15	(+ 5)	1562	394	458	162	0.77	5.09	9.67	2.44	2.83
-10	(+14)	1904	480	558	172	0.82	6.24	11.06	2.79	3.24
-5	(+23)	2292	578	672	182	0.86	7.57	12.60	3.17	3.69
0	(+32)	2725	687	798	191	0.89	9.07	14.25	3.59	4.18

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	544	137	159	116	0.55	1.91	4.71	1.19	1.38
-30	(-22)	688	173	202	133	0.63	2.43	5.20	1.31	1.52
-25	(-13)	870	219	255	149	0.70	3.08	5.85	1.47	1.71
-20	(- 4)	1092	275	320	164	0.77	3.88	6.63	1.67	1.94
-15	(+ 5)	1352	341	396	179	0.84	4.83	7.53	1.90	2.21
-10	(+14)	1652	416	484	193	0.91	5.94	8.53	2.15	2.50
-5	(+23)	1990	501	583	207	0.97	7.22	9.61	2.42	2.82
0	(+32)	2367	596	693	220	1.03	8.66	10.76	2.71	3.15

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	449	113	132	118	0.56	1.75	3.79	0.96	1.11
-30	(-22)	574	145	168	137	0.65	2.25	4.19	1.06	1.23
-25	(-13)	732	184	215	156	0.74	2.88	4.69	1.18	1.38
-20	(- 4)	922	232	270	175	0.83	3.65	5.28	1.33	1.55
-15	(+ 5)	1144	288	335	194	0.92	4.55	5.92	1.49	1.74
-10	(+14)	1399	353	410	212	1.01	5.61	6.62	1.67	1.94
-5	(+23)	1686	425	494	230	1.09	6.82	7.34	1.85	2.15
0	(+32)	2006	505	588	248	1.17	8.19	8.07	2.03	2.37

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42° up + 45° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 46°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		